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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,375	07/08/2002	John A. Fifield	BUR920010181	4010

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EXAMINER

KANG, DONGHEE

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,375

Applicant(s)

FIFIELD ET AL. *W*

Examiner

Donghee Kang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 18-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 9 and 13 is/are rejected.
- 7) ☒ Claim(s) 7, 8, 10-12 and 14-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Claims 18-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.

Information Disclosure Statement

2. Acknowledgment is made of receipt of applicant's Information Disclosure Statement (PTO-1449) filed July 8, 2002.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the phrase "said electrodes being electrically coupled together and to a source of programming energy" in claim 13, in lines 5-6 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Antecedent basis for the claimed subject matter in claim 13, in lines 5-6 is required, namely:

the phrase "said electrodes being electrically coupled together and to a source of programming energy" which is not disclosed in the description section of the specification. The disclosure only discloses the source of programming energy is coupled to a diffused electrode.

Claim Objections

5. Claim 9 is objected to because of the following informalities:

The phrase said source of programming energy comprises a voltage source is misdescriptive because there is insufficient antecedent basis for this limitation in the claim. The examiner suggests that the programmable element further comprising a source of programmable energy, wherein said source of programmable energy comprises a voltage source.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-6 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (US 5,656,534).

Regarding claim **1**, Chen et al. teach a programmable element, comprising (Fig.3):

a first device (10) on a substrate (18) having a first electrode (36') and a first insulator (28) disposed between the substrate and said first electrode, said first insulator having a first value of a given parameter; a second device (12) on a substrate (18) having a second electrode (36'') and a second insulator (26) disposed between the substrate and said second electrode, said second insulator having a second value of said given parameter that is different from said first value (Col.3, lines 60-65).

Regarding claim **2**, Chen et al. teach said given parameter is thickness.

Regarding claim **3**, Chen et al. teach said first insulator (28) has a dielectric breakdown voltage that is less than that of said second insulator (26).

Regarding claim **4**, Chen et al. teach said first insulator is comprised of oxide layer. Chen et al. do not expressly teach the oxide layer being an silicon oxide.

However, it is recognized in the art that the oxide is a generic term used for silica, particularly silicon oxide. Therefore, the phrase "oxide layer" would meet the recited term "silicon oxide".

Regarding claim **5**, Chen et al. teach said first device further comprising a third electrode (14) on the substrate adjacent said insulator of said first device.

Regarding claim **6**, Chen et al. teach said third electrode comprising a diffusion region.

Regarding claim **13**, Chen et al. teach a programmable element, comprising a programmable device comprised of a first integrated circuit element (10) having a first

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dielectric breakdown voltage and a gain device comprised of a second integrated circuit element (12) having a second dielectric breakdown voltage circuit elements each having at least one electrode, said electrodes being electrically coupled together and to a source of programmable energy, said second integrated circuit element conducting current when the first integrated circuit element has been programmed (Col.3, lines 59-65).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Bracchitta et al. (US 6,130,469).

Chen et al. do not explicitly teach the programmable element further including a source of programmable energy, wherein said source of programming energy comprises a voltage source. However, it is conventional to use the voltage source as a source of programmable energy and also Bracchitta et al. in Fig.1 teach the programmable element comprising a voltage source (18) served as a source of programmable energy. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the voltage source as the source of programmable energy in Chen's device in order to alternate the characteristic of an integrated circuit.

Allowable Subject Matter

10. Claims **7-8, 10-12 & 14-17** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Chen et al. do not teach the first electrode comprising a plurality of separate conductive lines, said plurality of separate conductive lines overlaying said diffusion region, wherein the first device comprising a diode and the second device comprising an FET and

wherein the first device comprises a diffused electrode that is coupled to a source of programming energy.

Conclusion


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghee Kang whose telephone number is 703-305-9147. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on 703-308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

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Donghee Kang
Examiner
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May 3, 2003